

**MORPHOLOGY-BASED OPTIMIZATION OF CARDIAC  
RESYNCHRONIZATION THERAPY**

**ABSTRACT**

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A method and apparatus for delivering cardiac resynchronization therapy (CRT) in which an evoked response electrogram is recorded during one or more cardiac cycles and used to aid in the selection of resynchronization pacing parameters and/or to monitor the effectiveness of resynchronization therapy. The morphology of an evoked response electrogram may be recorded and analyzed to determine if and when intrinsic activation of one ventricle is occurring in order to optimally adjust the programmed atrio-ventricular (AV) delay interval for ventricular resynchronization pacing of a patient with intact AV node conduction.

10

"Express Mail" mailing label number: EV299684913US

Date of Deposit: November 26, 2003

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